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**From:** Sarah Fields <sarahmfields@earthlink.net>  
**To:** <rherbert@utah.gov>  
**Date:** 5/13/2009 5:22 PM  
**Subject:** Energy Queen GWDP

**CC:** <jkennington@utah.gov>, <mgarn@utah.gov>, <MHERKIMER@utah.gov>, <paulbak...>

Dear Mr. Herbert,

I have some questions regarding the proposed Ground Water Discharge Permit for the Energy Queen Mine in La Sal, San Juan County.

Recently I received a copy of the Energy Queen August 6, 2007, UPDES permit application that was approved by the Division of Water Quality (DWQ). See [http://www.uraniumwatch.org/energyqueenmine/dwq\\_eq\\_UPDES\\_app.070806.pdf](http://www.uraniumwatch.org/energyqueenmine/dwq_eq_UPDES_app.070806.pdf)

There is information in that application that is very different than the information provided in the October 31, 2008, Water Discharge Permit (GWDP) application and at the hearing and meeting in La Sal on April 6.

1. First of all there is a discrepancy between the amount of water that Energy Fuels Resources expects to pump from the mine and discharge into the West Coyote Wash. The UPDES application estimates 288,000 gallons per day pumped from the mine, with a discharge of 286,600 gallons per day. The GWDP application estimated half that amount: 144,000 gpd from the mine and 142,700 gpd surface discharge.

Can you explain this discrepancy?

2. Then there is the flow of the mine water from the mine, through the treatment system, to the point of surface discharge. The UPDES application, Figure 2, Water Flow Schematic (page 12), shows 288,000 gpd of mine water entering the treatment plant (or surge tank), flowing from the treatment plant to ponds ("direct precipitation into ponds"), then flowing to the out fall, with some evaporation from the ponds.

The Conceptual Diagram of Flow in the Proposed Energy Queen Mine Water Treatment Plant, Figure B2, that accompanied the application for the Ground Water Discharge Permit shows 144,000 gpd of mine water flowing to the untreated water pond (or contingency pond), then to the treatment plant, then to the treated-water tank (with some flowing to a geomembrane bladder), and from the treated-water tank to the point of discharge. These are two very different systems.

How do you explain that there are two different treatment systems described in two different applications for the same facility?

Do you know if Energy Fuels intends to make such substantial changes in the amount of water and the treatment system, they would have to submit an amended UPDES application? The DWQ approved the UPDES permit based on the information in the August 6 application, which is no longer applicable.

3. This brings up the question of the barium chloride system itself. In an April 27 message to Matt Garn of the DWQ I asked the following:

"Also, I was wondering whether the barium chloride treatment facility, itself, is under the DWQ's jurisdiction. If so, is it under the UPDES permit or the GWDP, or both? Does the DWQ review the construction plans for the treatment system? Do you have data and information about the specific system from the manufacturer that shows exactly how it will work, its specifications, how it should be operated, and demonstrates that the system will be able to remove the radium and (supposedly) some of the uranium

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to meet the standards. The information in the GWDP is rather scant."

I have not received a reply to that inquiry.

In reviewing some technical information about barium chloride treatment systems, it is clear that after the addition of the barium chloride to mine water, the water must sit for a while, then the precipitant must be filtered out in some manner. In past treatment systems, the mine water would flow into ponds, where the precipitant would settle out. The diagram in the GWDP application does not explain or show how the precipitant would be removed from the mine water after the barium chloride treatment. Additionally, the diagram does not contain any information about the capacity of the treatment system.

It seems that the DWQ has not reviewed any technical or scientific information about the treatment system and has little to go on. Is that information irrelevant?

Does some other agency deal with the barium chloride system, how it is operated (it can be tricky), and the chemical and radiological hazards associated with such systems?

Does the DWQ know what health and safety regulations are applicable to barium chloride treatment systems in general and the specific kind of system used by Energy Fuels Resources in particular?

I would really appreciate some answers to my questions before DWQ makes any more decisions related to the Energy Queen Mine.

Thank you,

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